15

20

CLAIMS

A method of scanning comprising the steps of:
 providing a scanning system (10) having a sample holder (14,220,54) and a relatively movable scanning device (18);

performing a scan of at least a part of an object (22,250,52) located on the sample holder;

establishing orientation of a plane of the sample holder (14,220,54); and

interpreting data from the scan using the orientation of the sample holder characterised in that, the orientation is established using data from the scan of the object.

- 2. A method according to claim 1 wherein, the orientation is established by defining a plane (56b) of the sample holder.
- 3. A method according to claim 2 wherein, the plane in which orientation is established is limited by boundaries (76a,76b).
- 25 4. A method according to any preceding claim wherein, the orientation is established by extracting at least three measurements.
- 5. A method according to any of claims 1 to 3
 wherein, the orientation is established by extracting data for at least 240° around the surface of the sample holder.
- 6. A method according to any preceding claim wherein, the orientation is established by measuring during a

15

25

single process.

- 7. A method according to any of claims 1 to 5

 5 wherein, the orientation is established by measuring during more than one discrete processes.
- 8. A method according to any preceding claim wherein, the orientation is established within a defined10 vertical envelope with respect to the sample holder.
 - 9. A method of scanning comprising the steps of:
 providing a scanning system (10) having a sample
 holder (14,220,54) and a relatively movable scanning
 device (18);

scanning a datum; scanning a sample; and

interpreting data from the sample scan using data from the datum scan;

- 20 characterised in that the scanning system automatically carries out the datum and sample scans.
 - 10. A method of scanning comprising the steps of:
 providing a scanning system (10) having a sample
 holder (14,220,54) and a relatively movable scanning
 device (18);

scanning a datum; scanning a sample; and

interpreting data from the sample scan using data 30 from the datum scan;

characterised in that both the datum and sample scans are carried out effectively as one scan.